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Gregory S. Kelley

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EXAMINER

KOHARSKI, CHRISTOPHER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GREGORY S. KELLEY

Appeal 2009-005480
Application 10/820,659
Technology Center 3700

Decided: October 16, 2009

Before ERIC GRIMES, RICHARD M. LEBOVITZ, and STEPHEN
WALSH, *Administrative Patent Judges*.

WALSH, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) involving claims to a medical device. The Patent Examiner rejected some of the claims as anticipated and the remainder of the claims as obvious. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

STATEMENT OF THE CASE

“[T]he invention relates to medical devices formed by bonding together medical device components using aerated adhesives.” (Spec. 1:6-7.) Claims 1-18 are on appeal.¹ Claim 1 is representative and reads as follows:

1. A medical device, comprising:

a first component having an outer surface including an outer engagement portion;

a second component having an inner surface including an inner engagement portion, the inner engagement portion configured to fit over the outer engagement portion; and

an aerated adhesive layer positioned between the inner engagement portion and the outer engagement portion,

wherein the medical device is a catheter.

The Examiner relies on the following evidence:

US 6,180,544 B1	Jauchen et al.	issued Jan. 30, 2001
US 2001/0020161 A1	Klima et al.	published Sep. 6, 2001
US 2001/0026666 A1	Ferrera et al.	published Oct. 4, 2001
US 2003/0077423	Flanigan et al.	published Apr. 24, 2003
US 2004/0064129 A1	Deniega et al.	filed May 12, 2003

Cyprien Gay, *Stickiness - Some Fundamentals of Adhesion*, 42 INTEGR. COMP. BIOL. 1123-26 (2002).²

¹ Appellant states that claims 19-38 are withdrawn as directed to non-elected subject matter. (App. Br. 3.)

² The Examiner first relied on the Gay reference in a Supplemental Examiner’s Answer entered Nov. 26, 2008. Appellant responded to the Supplemental Examiner’s Answer in a Reply Brief filed Jan. 23, 2009.

The Examiner rejected the claims as follows:

- claims 1-4 and 7 under 35 U.S.C. § 102(e) as anticipated by Deniega;
- claims 5, 6, 8 and 13 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Ferrera;
- claims 9-12 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Jauchen;
- claims 14 and 15 under 35 U.S.C. § 103(a) as unpatentable over Deniega; and
- claims 16-18 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Klima.

INHERENT ANTICIPATION

The Issue

The Examiner's position is that Deniega taught a medical catheter having the components claimed, including an aerated adhesive layer. (Ans. 4.) Although Deniega did not explicitly teach that the adhesive should be "aerated," the Examiner found that Deniega's adhesive "will inherently . . . have some air voids present during the manufacture and assembly of the two components (280, 282) and therefore meets the broadest reasonable definition of an aerated adhesive." (Ans. 4.) The Examiner found that Gay supported finding that Deniega's adhesive would inherently be an "aerated adhesive." (Supp. Ans.)

Appellant contends that Deniega did not teach an aerated adhesive (App. Br. 5), and there is no basis for finding that Deniega's adhesive was

inherently aerated (*Id.* at 6). According to Appellant, the Gay reference “does not teach what the Examiner asserts.” (2nd Reply Brief, filed Jan. 23, 2009, at 1.)

The issue with respect to this rejection is whether the Gay reference makes it clear that an aerated adhesive was necessarily present in the catheter Deniega described.

Findings of Fact Related to the Inherent Anticipation Issue

1. The Specification teaches that an “aerated adhesive layer 52 includes a plurality of voids 54 that can be formed in a variety of ways,” e.g., “by metering an inert gas into the adhesive stream while applying the adhesive to the surfaces to be joined.” (Spec. 11:2-5.)
2. According to the Specification, “[t]he voids 54 can provide distensible regions within the aerated adhesive layer 52 that can distend or deform in response to stresses caused by the adhesive shrinking while curing.” (*Id.* at 11:11-13.)
3. Deniega taught using a biocompatible medical adhesive to hold the overlapping ends of catheter tubes 280 and 282 together. (Deniega, ¶ 108.)
4. Gay taught that when a rough solid surface is brought into contact with a soft enough adhesive, isolated air bubbles could be trapped in the valleys of the rough surface. (Gay, Fig. 1 legend.)
5. Gay described separation experiments involving “a thin adhesive film deposited on one plate and a solid probe that is brought into contact with the film and then pulled away.” (*Id.*, Fig. 2.)

6. At a certain point in the separation experiments Gay described, shown in the force-displacement curve of Fig. 2B as an “abrupt transition,” fingering instabilities or cavitation bubbles usually formed as the probe was pulled away from the adhesive. (*Id.*)

Principles of Law Relating to Inherent Anticipation

“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268 (Fed. Cir. 1991).

Analysis of the Inherent Anticipation Issue

The Gay reference taught that when a rough surface is contacted by an adhesive, isolated air bubbles could be trapped in the valleys of the rough surface. (FF4.) That is, air bubbles would be trapped between the adhesive and the rough surface, not that air bubbles would be trapped within the adhesive layer. In view of the Specification’s explanation that an “aerated adhesive” has voids in the adhesive layer (FF1), we are not persuaded that Gay’s Fig. 1 disclosure supports a finding of inherent air bubbles in Deniega’s adhesive layer.

Gay reported that when separation forces were applied to an adhesive layer, voids could form within the adhesive layer. (FF6.) Deniega did not teach applying separation forces when assembling the catheter parts with

adhesive. The Examiner has not pointed to evidence that Deniega necessarily applied separation forces like those applied in Gay's reported experiments. In the absence of evidence of such separation forces applied to Deniega's adhesive, we cannot find that fingering or cavitation necessarily occurred in Deniega's adhesive. We agree with Appellant that there is insufficient evidence to support the finding that Deniega inherently disclosed an aerated adhesive.

OBVIOUSNESS

Principles of Law Relating to Obviousness

When determining whether a claim is obvious, an Examiner must make "a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art." *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995).

Analysis of the Obviousness Rejections

Each of the obviousness rejections is premised on a finding that Deniega inherently disclosed an "aerated adhesive," but we have found the evidence insufficient to support that finding. Because the obviousness rejections do not make up for that deficiency in the prior art, we find that the obviousness rejections have not properly accounted for every limitation of the claims.

CONCLUSIONS OF LAW

The Gay reference did not make it clear that an aerated adhesive was necessarily present in the catheter Deniega described.

The obviousness rejections did not account for the “aerated adhesive” limitation and therefore did not set out a prima facie case of obviousness.

SUMMARY

We reverse the rejections of claims 1-4 and 7 under 35 U.S.C. § 102(e) as anticipated by Deniega; of claims 5, 6, 8 and 13 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Ferrera; of claims 9-12 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Jauchen; of claims 14 and 15 under 35 U.S.C. § 103(a) as unpatentable over Deniega; and of claims 16-18 under 35 U.S.C. § 103(a) as unpatentable over Deniega and Klima.

REVERSED

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